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| APPLICATION NO.                           | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/584,268                                | 04/12/2007  | Gaku Maruyama        | 062724              | 5644             |
| 38834                                     | 7590        | 08/18/2009           | EXAMINER            |                  |
| WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP |             |                      | KAHN, RACHEL        |                  |
| 1250 CONNECTICUT AVENUE, NW               |             |                      |                     |                  |
| SUITE 700                                 |             |                      | ART UNIT            | PAPER NUMBER     |
| WASHINGTON, DC 20036                      |             |                      | 1796                |                  |
|   |             |                      | NOTIFICATION DATE   | DELIVERY MODE    |
|   |             |                      | 08/18/2009          | ELECTRONIC       |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/584,268 | <b>Applicant(s)</b><br>MARUYAMA ET AL. |  |
|                              | <b>Examiner</b><br>RACHEL KAHN       | <b>Art Unit</b><br>1796                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4 and 7-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4, and 7-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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**DETAILED ACTION**

Claims 1, 2, 4 and 7-11 are pending as amended on 6/2/09.

***Response to Arguments***

Applicant's amendment filed 6/2/09 has been fully considered and overcomes the following:

The rejection of claims 1, 3 and 5 under 35 USC 112 has been withdrawn, as Applicant has amended claim 1 to remove "mainly," and claims 3 and 5 have been cancelled.

The rejections of claims 1 and 2 under 35 USC 102 (b) over Tanaka (US 6303741) and Fujimoto (US 3536804) have been withdrawn. Applicant has amended claim 1 to include limitations from original claim 3, thus overcoming the rejection.

The rejections of claims 5 and 6 under 35 USC 103 (a) over Pagilagan (US 6191251) in view of Vandevijver (US 5416189) and over Fujimoto (US 3536804) have been withdrawn. Applicant has cancelled claims 5 and 6.

Applicant's arguments filed 6/2/09 with regards to the rejections of claims 1-4 over Furukawa (US 3872055) have been fully considered but they are not persuasive.

Applicant argues that claim 1 is not obvious over Furukawa, because Furukawa discloses a broad range of phosphorus amount, and none of Furukawa's examples satisfy the presently claimed phosphorus amount and Na/P ratio embodiments.

This argument is unpersuasive. The range of phosphorus content taught by Furukawa (50-1000 ppm) significantly overlaps the range of phosphorus content recited in instant claim 1 (30-200 ppm). Similarly, the range of Na/P molar ratios taught by Furukawa (1-5) significantly overlaps the range of ratios recited in instant claim 1 (3.5-7). In order to overcome an obviousness rejection over Furukawa, Applicant must provide data showing that, where the instantly claimed ranges overlap with Furukawa's ranges, unexpected results are obtained within the instantly claimed ranges.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 2, 4 and 7-11** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Furukawa et al (US 3872055)**.

Furukawa discloses a polyamide resin having decreased gel formation in the molten state (column 1, lines 61-65). Furukawa gives many examples wherein the polyamide resin is comprised of meta-xylylenediamine and adipic acid (example 1, numbers 1-10; example 3, numbers 1-6; example 4, numbers 1-4; example 6, numbers 1-4; example 7; example 8, numbers 1-23; example 10, numbers 1-21; and example 12).

Furukawa teaches the addition of 50-1000 (preferably 100-500) ppm by weight, in terms of phosphorous to polyamide (column 4, lines 14-23). Furukawa also teaches the addition of an alkali metal compound (including many sodium containing compounds - column 4, lines 9-11) such that the molar ratio of alkali metal to phosphorous is 1 to 5 (column 4, lines 30-33). The ranges recited in instant claim 1 overlap, and are therefore anticipated by the ranges taught by Furukawa.

If the instantly claimed ranges are not considered anticipated due to lack of sufficient specificity, it would have been obvious to one of ordinary skill to optimize the amounts of phosphorous and sodium within the ranges disclosed by Furukawa. In any given composition, the concentrations of the components can be manipulated by a skilled person in the art to optimize properties as a routine experimental practice. One of ordinary skill would be motivated to optimize the conditions to minimize gel formation, thus making industrial processes involving the polymer more efficient (column 1, lines 12-25).

Furukawa et al. are silent on "back pressure increasing coefficient" as calculated by the equation in claims 1 and 2, and "Co-b value" as recited in instant claim 4.

However, as noted above, the polyamide resin of Furukawa et al. is identical to the presently claimed, and identical resins must have identical properties. Accordingly, the properties of instant claims 1, 2, 4 and 7-11 are inherent to the resins of Furukawa et al.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RACHEL KAHN whose telephone number is (571)270-7346. The examiner can normally be reached on Monday to Friday 8:00 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RACHEL KAHN/  
Examiner, Art Unit 1796

Rk

/Randy Gulakowski/  
Supervisory Patent Examiner, Art Unit 1796